

CLAIMS

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1. A container assembly comprising an open-ended container and a closure system therefor including:
- 5 (i) flexible membrane closing the open end of the container;
- (ii) a seal between the flexible membrane and the container; and
- (iii) a rigid closure mounted on the container having a resiliently deformable member juxtaposed to the flexible membrane, the resiliently deformable member pressing the flexible membrane against the container
- 10 in the vicinity of the seal, thereby reinforcing the seal sufficiently to withstand pressures generated on heating of the contents of the container.
2. A container assembly according to Claim 1 wherein the container and the rigid closure include a respective cam and follower, relative
- 15 movement between the cam and follower in a predetermined direction causing the rigid closure and the container to approach one another, thereby increasing the pressure exerted by the resiliently deformable member on the flexible membrane.
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3. A container assembly according to Claim 2 wherein the cam and follower include co-operating screw threads formed respectively on the container and the rigid closure.
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4. A container assembly according to any preceding claim wherein the
- 25 container includes a neck having an annular flange defining the said seal, the resilient member being substantially congruent with the flange whereby the resilient member presses the flexible membrane against the flange.

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5. A container assembly according to Claim 2 ~~or any claim dependent therefrom~~, wherein the rigid closure includes a laminar member and an annular skirt depending downwardly therefrom, the cam or the follower being provided on an inner wall of the skirt.

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6. A container assembly according to Claim 5 wherein the laminar member is a circular disc, the skirt depending from the outer periphery thereof.

a 10 7. A container assembly according to ~~Claim 5 or~~ Claim 6 wherein the laminar member is spaced from the flexible membrane by a distance less than the maximum possible extension of the flexible member towards the laminar member.

a 15 8. A container assembly according to ~~any preceding claim~~ wherein the resiliently deformable member comprises a foamed material secured to the rigid closure.

a 20 9. A container according to ~~any preceding claim~~ wherein the flexible membrane comprises a metal foil or a plastic film with a functional barrier layer adhesively secured on the container neck.

a 25 10. - A container assembly according to any of Claims 4 ~~to 9~~ wherein the container neck is generally cylindrical.

a 11. A container assembly according to ~~any preceding claim~~ including a lifting tab hingeably secured to the flexible membrane by the same material as that of the flexible membrane.

a 12. A container assembly according to ~~any preceding claim~~ in which the container is a metal, plastic or composite can.

13. A container assembly according to Claim 12 wherein the rigid cap supports of the body of the can in a radial direction.

14. A method of forming a container assembly according to Claim 2, comprising the steps of:

10 (i) securing a flexible membrane on the open end of the container by use of adhesives or heat-sealing, thereby forming a seal;

(ii) engaging the cam and follower of a rigid closure and the container with one another; and

15 (iii) moving the rigid closure and the container relative to one another to cause relative movement between the cam and follower in the predetermined direction, thereby causing the resiliently deformable member to press the flexible membrane against the container in the vicinity of the seal sufficiently to maintain the seal against pressures generated in the container on heating of its contents.

20 15. A method according to Claim 14 wherein the container has a neck including the step of securing the said flexible membrane on the open end of the said container neck by use of a heat-sealing method such as heat contact, ultrasonic, induction or hot air heating.

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Sub 16. A method according to Claim 14 wherein the step of moving the rigid closure and the container relative to one another includes rotating the rigid closure and the container relative to one another.

a 17. A method according to ~~Claim 14 or~~ Claim 16 wherein the container has a neck and wherein the step of adhesively securing the flexible membrane on the open end of the container includes the sub steps of applying adhesive material to the flexible membrane and/or the container neck; engaging the flexible membrane and the container neck with one another to define the seal; and curing the adhesive material.

18. A method according to Claim 17 wherein the substep of curing the adhesive material includes heating thereof.

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19. A method of packaging a food product, comprising the steps of placing the food product in an open ended container; closing the open end of the container with a container closure to provide a container assembly according to any of Claims ~~1 to 13~~, and heating the container assembly and the food product therein, the container closure system maintaining the seal between the flexible membrane and the container during such heating.

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20. A method of packaging a food product comprising the steps of closing an open end of a container having two open ends with a closure to provide a container assembly according to any of Claims ~~1 to 13~~; placing a food product in the container; closing the other open end of the container by flanging a container end thereto; and heating the container and the food product therein, the container closure system maintaining the seal between the flexible membrane and the container during such heating.

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a 21. A method according to Claim 19 ~~or Claim 20~~ wherein the step of heating includes cooking the food product in the container.